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FRONT COVER

Unloading Cotton at a Belgian Port

Belgium imports large quantities of cotton for its important textile industry. (Photo courtesy of Belgian Government Information Center.)

BACK COVER

United States—Belgian Trade, 1952

Cotton and linters and grains and preparations—all of which must find part of their market abroad—head the list of our agricultural exports to Belgium.

Credit for photos is given as follows: p. 143, Belgian Government Information Center; p. 149, Foreign Operations Administration.

NOTE.—"Animal Nutrition Research in India," by K. C. Sen, which was reviewed in *Foreign Agriculture* for June 1954, is available in the United States from St Martin's Press, New York.

NEWS NOTES

William G. Lodwick Appointed FAS Administrator

William G. Lodwick was appointed as administrator of the Foreign Agricultural Service late in June.

Mr. Lodwick brings to his new assignment broad experience in agriculture, both as a farmer and as an adviser in the foreign field. From 1940 to 1950, he operated a farm near his home town of Centerville, Iowa. Before then, he practiced law in Chicago. Since 1950, he has served in various capacities as a consultant on foreign agricultural problems. From 1950 to 1951 he was the agricultural consultant to the U. S. military high command in Germany; from 1951 to 1953 he was the agricultural member of the Joint Brazil-United States Economic Development Commission in Rio de Janeiro. In 1953 he was agricultural adviser to the Government of Pakistan at Karachi.

Clayton E. Whipple, who served as acting administrator of the FAS, will continue in his position as deputy administrator.

U. S. Agricultural Exports Continue Upward Trend

United States agricultural exports totaled $253 million in value in May 1954—an increase of 14 percent over the valuation of a year earlier.

The preceding month—April 1954—also showed a gain over the corresponding month of 1953—a gain of 15 percent.

For the period July 1, 1953 to May 31, 1954, the total value of our agricultural exports ($2,664 million) was 2 percent higher than it was in the corresponding period of 1952-53.

FOREIGN AGRICULTURE ALICE FRAY NELSON, EDITOR

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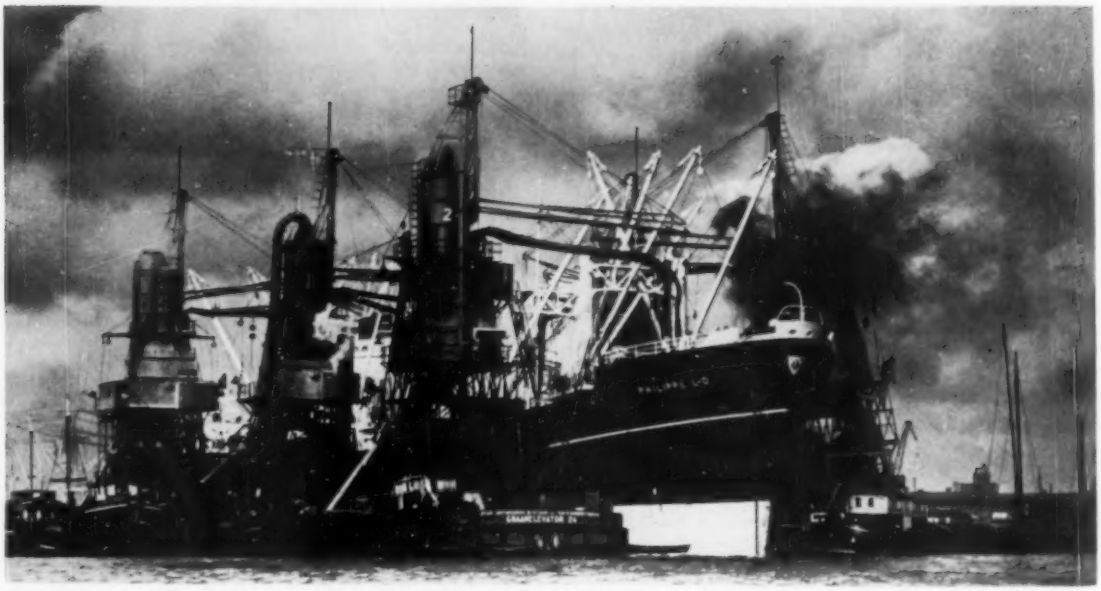


Into the busy ports of Belgium come products from around the world. Belgium is a trading nation and a natural market for United States farm commodities.

Belgium as a Market For U.S. Farm Products

by KAREN FRIEDMANN*

Belgium is a much more important market for United States farm products than its size or its population would indicate. It is only about the size of the State of Maryland and its population is barely 9 million. Yet, it ranks among the 10 best customers for United States farm products (in recent years, it has ranked as high as seventh). Belgium has been taking 3 to 4 percent of all our agricultural commodities sold abroad.

Belgium is a natural market for American farmers. It has large deficits in grains, fats, and oil; it cannot produce cotton or citrus fruit; and it grows little tobacco. In livestock products, Belgium is more nearly self-sufficient but only with the aid of substantial amounts of imported feedstuffs.

Belgium favors free trade, but has made a number of exceptions to this policy—mainly in the form of tariffs and licensing—many of them for the benefit of the country's agriculture. Yet obstacles to trade are not nearly as severe as in many countries. Specific dollar import restrictions, for example, have not been extensive. In general, commercial considerations determine where purchases will be made to a greater extent in Belgium than in most European countries.

General Economic Setting

Belgium is a trading nation. Few countries have greater value of foreign trade in relation to population. Raw materials for Belgium's industry and agricultural products dominate the imports of this small and densely populated country; manufactured goods constitute most of the exports. Belgium is one of the few European countries that has not suffered seriously from balance-of-payments problems in the postwar era nor from the specific and common shortage of dollars. There are a number of reasons for this, among them the dollar surplus of the Belgian Congo.

* The author made extensive use of reports from the U. S. Embassy in Brussels.

Mrs. Friedmann is Agricultural Economist, European Analysis Branch, FAS.

The recent rapid recovery of production and foreign trade of neighboring countries—Western Germany, the Netherlands, and the United Kingdom especially—is indirectly the cause of some concern to Belgium. During the postwar reconstruction period there were ample export outlets for Belgium's iron and steel, coal, and textiles and other manufactured products. But by now Belgian industry is facing some difficulty in competing with countries that, with their recent intensive investments, now possess more modern and productive industries in some fields. High wages in Belgium are also a factor. The presence in Belgium of a somewhat greater unemployment than is considered normal makes it difficult for that country to encourage schemes that at first may mean increased unemployment.

In spite of these problems the Belgian economy is considered essentially sound, and the standard of living is high. Industrial and agricultural production as well as foreign trade volume were at high levels in 1953, though price declines caused the value of foreign trade, especially exports, to recede somewhat from the record levels of the two preceding years. Dollar imports still exceed dollar exports, though increased exports and decreased imports narrowed the gap in 1953. Other dollar transactions, however, resulted in a net dollar surplus for 1953.

Type of Agriculture And Agricultural Production

Climate and soils in Belgium are best adapted to livestock farming, especially dairying, and livestock products contribute about three-fourths of the average gross value of farm production. Farms are small and generally family operated. There is a large number of very small holdings, which provide part-time occupation for industrial workers. Through careful cultivation, hard work, and intensive applications of fertilizers Belgian farmers produce crop yields that are among the highest in the world.

The predominance of livestock in Belgian farming is clearly reflected in the use of the farmland. Half of this land is in grass and green fodder. Half of the 15 percent that is in grain is given to coarse grains. Furthermore, most of the rye acreage and roughly half of the row crop acreage produce livestock feed rather than crops for human consumption. All in all an estimated 75 percent of the Belgian farmland produces feedstuffs. In addition Belgian farmers convert large amounts of imported feedstuffs—grains and oilcake—into livestock products, largely for domestic consumption. The main food crops are wheat, potatoes, and sugar beets. Fruits and vegetables are important nutritionally, but do not claim large acreage. Among the industrial crops are such well-known Belgian specialties as flax, chicory, and hops.

Sufficiency of Domestic Production

The output of agricultural products by Belgian farmers is far from sufficient to cover the needs of the country's nearly 9 million people. So far as foodstuffs are concerned the greatest deficits are in bread grains and fats. Some 800,000 short tons of bread grains, almost all wheat, and about 125,000 to 175,000 tons (net) of fats are imported annually. Imports of fruit are also important, amounting to more than 200,000 short tons annually, well over half of which is citrus fruit. In livestock products Belgian farmers more nearly meet the needs of the country, yet imports of butter, cheese, and meats are of some importance.

One of the few food products of which Belgium has had a net export surplus is sugar, and that has been in recent years only.

Of the nonfood agricultural commodities, Belgium imports, among other things in significant quantities, tobacco and cotton.

The small tobacco production of Belgium supplies only about 4,000 tons of an annual consumption of about 26,000 tons.

Belgium has an old and famous flax industry, but imported fibers have long since become the major raw material for the Belgian textile industry. Raw cotton imports in 1953 totaled 101,000 short tons, as compared with 96,000 tons in 1952 and 114,000 tons the year before. Activity in the Belgian cotton industry was termed satisfactory in early 1954 and considerably better than a few months earlier.

U. S. as a Supplier Of Agricultural Products to Belgium

Both before and after World War II the United States has shipped a wide variety of agricultural products to Belgium. During 1945-50 it shipped exceptionally large quantities of farm products to Belgium, but Belgium, like many other countries during that period, turned to the United States for products that other countries, then suffering reduced production as an aftermath of the war, would normally supply.

Grains and cotton are the most important agricultural products exported by the United States to Belgium, but tobacco, fats and oils, and fruits also move in substantial quantities. Sausage casings and pulses are of some significance, and, in recent years, horsemeat has been an important smaller item.

According to preliminary figures United States cotton exports to Belgium declined drastically in 1953, when they were only 35 percent of the 1952 amount. Relatively high prices for the United States product was given as the main reason for a switch to Mexican and Brazilian cotton. As mentioned, activity in the cotton industry in the spring of 1954 is said to be satisfactory. The question of a recovery of United States cotton exports to Belgium is therefore mainly a question of price. Since

TABLE 1.—*Composition of Belgian[1] imports and exports, 1952*

[In percent]

Item	Imports	Exports
Food products	18	3
Beverages and tobacco	2	.....
Raw materials, except fuels	26	7
Fuels, lubricants	9	6
Fats and oils	1	2
Chemical products	4	7
Manufactured products	20	61
Of which textiles	3	10
Of which iron and steel	3	30
Of which metal manufactures	2	5
Machinery and transportation equipment	15	11
Various manufactures	4	3
Other	1	.....
Total	100	100

[1] Including Luxembourg.

early 1954 United States prices have again been competitive.

Belgian imports of tobacco were nearly the same in 1953 as in 1952 and the United States share was also about the same. In 1950 and 1951, imports of United States tobacco had been extraordinarily high. In 1952 Belgium adopted an import policy for United States tobacco that limited the quantities to be admitted to 90 percent of the previous year's shipments. However, these quantities declined much more than 10 percent, because, after the record imports of 1950 and 1951, stocks of United States tobacco on hand were very large. There has been a tendency among Belgian manufacturers to shift to cheaper tobaccos, in part because fixed prices on their products have given them a very narrow profit margin.

Grain imports from the United States in 1953 dropped, owing partly to a large domestic wheat crop in 1952, and partly to a continuous slow decline in bread consumption. Furthermore, trade sources report a preference for Canadian wheat on quality grounds. Imports of corn from the United States dropped, too; that decline was attributed in part to lower prices of corn from Argentina and Yugoslavia.

Today's market for United States fruit in Belgium is quite different from that of prewar. Oranges, which generally were not exported from the United States to Belgium in substantial quantities before the war, are now shipped at a rate of 700,000 to 950,000 boxes a year. Apples, on the other hand, important in Belgium-U. S. trade before the war, are now of little significance. Belgium's protected apple production is now large enough to meet most of the demand. What deciduous fruit is imported comes largely from the Netherlands.

Inedible tallow and greases account for most of the postwar increase in fats imports from the United States. The price of United States flaxseed is said to have brought to a halt imports of this commodity in 1953.

Belgian Export Products

Agricultural exports account for only some 4 to 5 percent of all Belgian exports, and a part of them are reexports of commodities that have been processed in Belgium. The predominance of manufactured products in Belgium's export trade is clearly shown in the table. The commodity category designated "manufactured products" accounted in 1952 for 61 percent of exports, to which may be added "machinery and transportation equipment" and "various manufactures," bringing the total to 75 percent. Iron and steel are of major importance, but textiles are also of considerable significance. These two groups account for the bulk of Belgium's exports to the United States, but diamonds and glassware, which are among the most widely known Belgian exports, are fairly important too.

Belgian exports to the United States have been of growing importance. In 1952, among European countries only the United Kingdom exported much more to the United States than Belgium, and West German exports exceeded Belgium's only a little. In 1953, however, Belgian exports rose to unprecedented heights, owing to greater demand for Belgian steel products, influenced by strikes in this country. At the same time, Belgian imports from the United States declined—wheat and cotton, drastically—so that there was a near balance in Belgian foreign trade with the United States. The demand for steel weakened, however, during the latter months of the year and the exceptionally high level of United States takings of Belgian steel is not likely to be resumed.

Agricultural Trade Policy

Since a high level of foreign trade is essential to the welfare of Belgium, the basic policy of the country has always been in favor of as free a trade as possible. Extensive protection of agriculture has not been practiced because high food prices would mean higher labor cost for industry, detrimental to its ability to compete in foreign markets. Furthermore, so far as recent years are concerned, the relatively easy foreign exchange situation of Belgium has made rigidly enforced exchange controls unnecessary—controls that, because of the quantitative restrictions they imply, have in most European countries led to a high degree of protection of domestic industries, whether that was intended or not.

There have been deviations from this basically liberal trade policy, however, frequently for the

benefit of agriculture. With its large number of small high-cost producers and strong farm organizations that influence the government's policies, Belgium has considered it necessary to grant some protection. It is realized that consolidation of farmland and modernization of farming practices would make Belgian farmers less vulnerable to foreign, especially Dutch, competition, but it is feared that those persons who would be forced out of farming in the process would add to the ranks of the unemployed.

The Benelux agreement of 1944 between Belgium, Luxembourg, and the Netherlands aims at a gradual merging of the economies of the three countries. One of the preliminary steps, the tariff union, was put into effect on January 1, 1948. Accordingly, imports of Netherlands' agricultural products into Belgium should theoretically be free, but Belgian farmers objected strongly to this competition with lower-priced Dutch farm products, claiming that Dutch farmers enjoy a higher degree of governmental subsidization or protection. As a consequence, minimum prices are applied to a number of Dutch agricultural products, when imported into Belgium, a device that provides effective protection for the Belgian producer.

For imports from other countries the joint Benelux tariff applies. Grains are duty-free, but there is a flour duty of 3 percent, and wheat imports are limited by variable milling percentages, which stipulate that a certain percentage of all flour milled must be of domestic origin. The percentage will of course vary with the availability of domestic wheat. For certain fruit and vegetable products, a so-called import calendar fixes periods during which imports are prohibited so as to assure the marketing of the domestic supply.

Belgian foreign exchange regulations have, as mentioned, not been nearly as restrictive of dollar imports as have those of most European countries. Some liberalization of what dollar restrictions there were took place in February 1953.

In June 1954 Belgium-Luxembourg and the Netherlands jointly took a step further in the direction of liberalization of imports from the dollar area. The countries published a common list of commodities—a total of some 800 tariff items—that are free of quantitative restrictions even when imported from the dollar area. Very few commodities are now subject to special dollar restrictions and there are no United States farm products among them. This does not mean of course that all farm products can be freely imported into Belgium, but it does mean that the restrictions that are applied are the same for United States products as they are for those of all other countries (except the Netherlands). In this category are, for instance, the seasonal restrictions on fruits and the restrictions on commodities that are subject to the special minimum price regulations under the Benelux agricultural protocol, as mentioned above.

Outlook

Despite the drop—of about 1/3 in value—in imports of United States farm products in 1953, Belgium is basically a good market for many of the agricultural products we need to sell abroad—wheat, feed grains, fats and oils, tobacco, cotton, and citrus fruits, for example. Belgium's income level is high, its currency is sound, and its trade policies are relatively favorable. Furthermore, the United States imports at a high level from Belgium. There may be some decline in our imports, but the Belgian Government and business community are actively seeking ways of maintaining their exports, which are so vital to the economy of the country.

True, domestic agricultural policy is aimed at increased productivity; but Belgium cannot possibly produce all the farm commodities that it needs and some of them it cannot produce at all. Where Belgium will buy will be determined largely by such commercial considerations as price, although possibilities for compensatory exports to East Europe or Latin America may influence the decisions on where to buy grains.

Increased productivity in the dairy industry will mainly affect the Netherlands, now the only important supplier of dairy products to Belgium. And any increases in output of deciduous fruits will be of little significance to United States exports, since our deciduous fruits have little chance in the Belgian market except in the spring, when the Belgian and Netherlands crop has been exhausted.

It seems highly likely that in a near future there will be no separate Belgian and Netherlands market and trade policies to consider, but only the Benelux market. For several years it has appeared that the further development of the Benelux economic union had come to a standstill, at times even regressing, but significant developments have recently taken place. For this, a great improvement in the Dutch foreign exchange position and some increase in Dutch wages to levels approaching the Belgian are largely responsible. In February 1954 it was decided that beginning March 1 of this year and spread over 2 years a common trade and financial policy will be established for Benelux in relation to other countries. This means that trade agreements and similar treaties will be negotiated by Benelux jointly and not by the individual countries. The new common free list vis-à-vis the dollar area is part of this program. During the same period capital movements within the Union will gradually be freed. It will be recalled that a tariff union for the area has existed since 1948. A Benelux market will be of considerable importance to American agriculture, for in 1952 Japan alone surpassed the Benelux countries in the value of agricultural products imported from the United States.

Research and Extension In Agricultural Progress*

By HENRY HOPP

Since World War II the concept that technical service to farmers is an effective tool for agricultural progress has grown rapidly in acceptance throughout the world. Programs to give this type of service are being set up at an unprecedented rate. Naturally these programs look to older ones for guidance. Too superficial a look, however, can pass over certain basic principles that make technical service an effective tool.

Technical services may come to farmers from many sources—in some countries, from a whole complex of sources—organized jointly or separately in a great variety of patterns. But no matter what the organizational pattern, the efforts generally are of two kinds: Research efforts to discover facts and principles that will solve agricultural production problems, and educational or extension efforts to help farmers put the solutions into effect.

The efforts of research can be brought to the attention of farmers in diverse ways, but the basic role of research is to provide new knowledge that can be incorporated into extension programs. Although extension programs can function for a time without new information, and research programs can function for a time without organized outlets, the long time effectiveness of technical agricultural services depends upon a continuous flow of recommendations from research through extension to the farmers.

Although this "flow" concept is well recognized in the abstract, it often receives little more than lip service. The fact is that technical service efforts, as they grow, tend to divide into two relatively separate organizational units: One for research activities and the other for extension activities. Research activities usually devolve upon a staff of research technicians; extension activities, upon the extension agents. In addition, there is usually some overlapping of effort: The extension organization often engages in some minor research, either through special projects or the individual efforts of its agents; and the research staff engages in supplementary extension work through its publications and through its individual consultations.

As the technical service efforts of a country grow in complexity, the organization of research and extension into two separate compartments serves important administrative and managerial ends. However, it must be recognized that as research and extension become increasingly separate, liaison becomes increasingly perfunctory.

But agricultural development does not and cannot take place in the form of separate and unrelated events. A solution to a problem usually starts as one man's idea. It must then be tested, adapted, practicalized, and perfected in various ways until it finally becomes a practice that can be used by farmers. This flow of development requires various degrees of cooperative effort among those individuals and groups who have the facilities for doing what the problems individually require to be done. The rate and efficiency of agricultural development can be greatly expedited by creating an organizational pattern that makes this cooperation easy to accomplish.

Nothing so much points up the need for this kind of organizational pattern as an objective appraisal of the limitations that are inherent in the separation of research and extension. It is unrealistic to expect research technicians, on their own, without cooperative help, to produce definitive recommendations for farmers. The fact is that the facilities and manpower available to these technicians usually confine them to an experiment station or to relatively few locations. They generally use small plots, experimental materials as uniform as possible, a high degree of experimental control, complex designs, and similar procedures—features of the so-called research method, features that to the casual outsider give research the appearance of

* This article was prepared for publication in Spanish in *Turrialba;* it will appear in the July-September issue of that journal.

Dr. Hopp, Chief, Trade Statistics Branch, FAS, was Biometrical Consultant, FAS, working in the technical cooperation program administered by FOA, when he wrote this article.

being impractical. Actually, however, this research work is essential to the initial phases of screening a good many of the practices and the variants of practices that appear promising in the search for solutions to production problems. The research techniques that some people call unrealistic have been found to be the best means of getting reliable results in the shortest time and at minimum cost. There is ample evidence that attempts to short-cut proper research with so-called practical testing usually give misleading answers.

On the other hand, results obtained with the usual research procedures can have serious limitations in applicability. The fact has to be faced that research men, working in small plots and in few locations, do not generally produce the final practical answers to farmers' problems. For most problems, it is not possible for the research technician alone to work out the practical aspects of applicability: he needs cooperative help.

It is likewise unrealistic to expect an extension staff to function permanently without close technical support. Extension technicians, however well trained and resourceful, will fail in bringing about sound and expanding agricultural development if they are not backstopped by a continual flow of definitively proved new practices. Nor can they be expected to develop any large number of new practices themselves while functioning at the farmer level. This latter point needs emphasis; although occasionally an extension technician might have success in this direction, most solutions developed in this way will be far less satisfactory than those that can be developed through proper organizational procedures. As a matter of fact, one of the greatest wastes of money is to have extension people, untrained in the methods necessary to get reliable answers, try to do research.

Slow progress sometimes ascribed to technical service efforts can often be traced directly to organizational procedures that discourage rather than encourage capitalizing on the results of research. As a whole, extension agents are in very great need of reliable answers to problems they face when dealing with farmers; and by and large the agents are well aware of this need. Unfortunately, these answers do not come forth with regularity and reliability when extension and research are severely compartmentalized. This situation tends, moreover, to create somewhat of a morale problem in that a lack of practical results may be ascribed to inabilities of the technicians when, in fact, it is due to faulty organization.

What does it take, then, to produce definitive recommendation for farmers? What are the problems involved in applying research results, obtained under the artificial conditions of a small-plot experiment, to practical farming? The problems of applicability can be grouped under these heads:

1. **Regionality** in the methods of application and in the response;

2. **Practicability** under farm conditions and under farmer operations;

3. **Profitableness** under the less-than-ideal conditions existing on farms;

4. **Variability** in benefit as a result of variations in soil, etc.;

5. **Comparability** with the various practices already used by farmers.

Until these problems of applicability are adequately answered, practical recommendations from research will be haphazard and unreliable. And these problems can be solved only by a dispersed type of test procedure—a procedure that covers the area in respect to both its physical and human variations.[1] A research staff, by itself, is not in a position to achieve this coverage. It is a job jointly for research and extension. And so that it can be jointly done, an organizational procedure must be devised whereby testing for applicability can be carried out efficiently and on a continuing basis. Once such a procedure has been set up, it will become obvious that many a proposed practice needs only extensive testing. Technical service plans should include assigned responsibility and an organized procedure for taking this essential step of adapting research to practice.

In order to help administrators visualize more concretely the organizational job that is required, there is outlined here a device for securing an expeditious flow of new agricultural development.

1. Set up a joint technical agricultural commission consisting of representatives of the research and extension organizations. The members of the commission would have to occupy positions high enough in their respective organizations to give authority to their joint decisions. They should be competently trained in agricultural subject matter and have broad comprehension of the main prac-

[1] Dr. Hopp has developed this procedure in detail in "A Guide to Extensive Testing on Farms," published in 4 parts by FAS, April 1954.

tical farm problems existing in the region the commission serves.

2. The function of the commission would be to develop a program of applicability testing—a program for extensive testing of proposed practices.

3. The commission should decide when practices developed by research are ready for applicability testing, and what scope that testing should have before the practice can finally be recommended to farmers. In making these decisions, they should draw upon the knowledge and viewpoints of those research and extension specialists whose experience bears on the proposal.

4. The commission should likewise consider ideas of the extension agents as to on-the-farm needs for new information, and would decide how best these needs can be filled, whether through experiment station research or extensive testing.

5. The commission should cause to have developed by the proper technicians, subject to its approval, project plans for extensive tests on specific practices. These plans would have to be carefully considered within the framework of informational needs and operating practicality.

6. Responsibility for executing the plans should be assigned to specific technicians; if the workload warrants, technicians should be specifically employed to supervise the conduct of extensive tests. These technicians should operate with the aid of local extension agents, and the objective and nature of each test should decide what individuals are to be concerned with it.

7. The results of a test should be drawn together and analyzed nationally so that the conclusions can be expressed regionally.

8. At the termination of a project, the commission should consider the practicability of results obtained. Its conclusion should then be so issued that the extension agents can proceed with confidence in taking recommendations to farmers.

This procedure is offered as an illustrative example; actually it would have to be adapted to the local pattern of technical services. But whatever the organizational procedure used, it should be recognized that applicability testing is a defined need and cannot be done successfully in a haphazard manner. The cooperative nature of the work requires definite assignment of responsibilities.

Applicability testing is seriously needed in many technical service programs. Organized activity of this type could be a contribution of the highest order to future agricultural development; it is a link that is necessary in effectuating the basic purposes for which research and extension programs are undertaken as a coordinate part of technical service efforts.

Near Terbol, Iran, farmers are making a fertilizer test on corn. Actual farms—with their various soil, slope, cropping, and management conditions—are the ultimate test of any new or improved practice.

United States Dairy Products In Foreign Trade

by TERRENCE W. McCABE

"For Commerce, tho' the child of Agriculture,
Fosters his parent, who else must sweat and toil
And gain but scanty fare."

Officials of the United States Department of Agriculture, confronted with tons of Government-owned products under price support operations, have decided that William Blake, the British poet who wrote these words over 130 years ago, knew whereof he spoke and that it is high time commerce started fostering agriculture in the United States. The Department is using its authority to assist the commercial sale of agricultural commodities, specifically dairy products, in foreign trade channels. It is doing so by making commercial sales of dairy products possible at prices comparable with world prices; this movement supplements the Government-sponsored movement of such products abroad under the various aid programs.

The United States In the World Dairy Market

Despite its pre-eminence as the No. 1 milk producing nation of the world, the United States has not been a prime exporter of dairy products. Historically, the United States has ordinarily exported considerably less than 1 percent of its total milk production. In fact, it has been a net importer of dairy products, being an important consumer of the higher priced variety cheeses such as the sheep's milk cheeses, Roquefort and Pecorino. Only during periods of war, when other sources of milk and dairy supplies were cut off or were maintained for domestic consumption, have the vast dairy resources of the United States been channeled to any degree into world trade. From 1924 through 1940 United States exports of dairy products, on a whole-milk-equivalent basis, never exceeded seven-tenths of 1 percent of domestic production, and each year imports exceeded exports. With the full impact of World War II, however, the World War I pattern reappeared. The United States became a net exporter, and, in the peak year 1944, 5.7 percent of production found its way into export channels. A large part of these exports during the war years was made under Government programs.

During the postwar period, Government shipments have been maintained through the various aid programs, but the trend in dairy products trade has been gradually toward the prewar pattern: In 1952 the United States again became a net importer of dairy products on a whole-milk-equivalent basis. In 1953 the trend was reversed slightly; total exports rose to $76.8 million as against $68.6 million in 1952, but this reversal was due primarily to the movement of Government-owned dairy products into foreign relief consumption.

The major share of the 1953 commercial exports, both in quantity and value, was accounted for by processed milk products. The 151 million pounds of canned milk exported was 5.3 percent of total production of that product, and the more than 46 million pounds of dry whole milk shipped abroad represented almost 44 percent. While the 98 million pounds of nonfat dry milk solids exported were 8.2 percent of production, 50 percent or more were shipped under Government programs or under the auspices of the United Nations Children's Fund.

Exports of butter amounted to only 363,000 pounds, less than one-tenth of 1 percent of production. Cheese exports were not quite 6 million pounds, less than one-half of 1 percent of production. Contrasted with these export figures, programed allocations for foreign welfare distribution under Section 416 of the Agricultural Act of 1949 are great. In the 10 months the current program for butter has been in operation, more than 60 million pounds have been donated to United States private welfare agencies for overseas relief distribution. In the 8 months that cheese has been so donated, more than 31 million pounds have been allocated for foreign distribution. And, roughly, in the year that allocations of nonfat dry milk solids have been made, more than 100 million pounds have gone abroad for distribution.

Pattern of United States World Trade in Dairy Products

More than 90 percent of the United States trade in dairy products is with African, Middle Eastern, Asian, Caribbean, and Latin American countries. More than half has been in the Western Hemisphere.

Practically all of the butter export trade of the United States is with Caribbean countries; yet, of the total Caribbean import requirements of butter, the United States supplies only about one-eighth. About nine-tenths of our cheese exports go to Western Hemisphere countries, but these exports supply less than one-third of the takings of these nations.

In canned milk the export trade of the United States is fairly well divided between Asiatic and Latin American countries, with the Asiatic countries taking just over half. But the United States supplies only about one-fifth of the imports of Asiatic nations and slightly more than two-fifths of the requirements of Latin America.

Our dried milk products are imported by Middle Eastern countries in considerable quantities. They take one-fifth of all United States exports to supply about two-thirds of their need, as measured by imports. The 10 percent of United States dried milk exports going to Asia furnishes only one-sixth of Asiatic imports. Almost three-fourths of the United States shipments of dried milk to Caribbean and Latin American countries is in the form of dried whole milk and represents about 95 percent of all our dried whole milk shipments. However, the United States supplies less than two-thirds of the import requirements of this area.

Priced Out of Market

The plain fact is that insofar as world trade in dairy products has been concerned during the past several years, the United States has been priced out of the market on three of the five major dairy items —butter, cheese, and nonfat dry milk solids. These are the commodities that have been used to support the dairy industry, and, until April 1954, the prices on these items were maintained by the Government at 90 percent of parity; in April, support prices were reduced to 75 percent of parity. That month the support price for butter was 57.5 cents per pound; the Australian export price at that time was quoted at 42 cents. The support price on cheese at 75 percent of parity is 32.25 cents per pound; during April, New Zealand was quoting Cheddar cheese at 25 cents per pound, and the Netherlands price on full cream Gouda was reported at 22.5 cents per pound. With a 75 percent of parity support price of 15 cents per pound on nonfat dry milk solids, the United States, during April, was competing with prices of other primary milk producing nations of from 2 to 5 cents cheaper.

Only in canned milk and dried whole milk prices did the United States have a competitive price status. During April 1954, New York prices for evaporated milk ranged from 11.9 to 13.5 cents per pound; these compared with 12.5-cent and 12-cent prices reported from Canada and the Netherlands, respectively. The price range on dry whole milk during April in New York was 27 to 31 cents; the lowest price noted during the month was a special quotation to the Israeli Government by the Netherlands of 27.5 cents per pound in 1-pound cans, while Canadian and Australian quotations both were at 29 cents.

Export Outlook

Various Government export programs such as the recently enacted Public Law 480 and Section 416 of the Agricultural Act of 1949 will serve to supplement normal commercial trade in moving agricultural commodities, particularly those in "surplus" supply, into greater use abroad. In addition to the good will that will be created, some advertising will be achieved through introducing consumers to United States dairy products.

The program to sell Government stocks of butter, cheese, and dried milk through commercial channels at prices comparable with those in world markets is an attempt to secure for the United States a fair share of the world trade in these commodities—to allow traders to introduce United States dairy products where they have not heretofore been available to any extent. It is hoped that the United Kingdom, which accounts for two-thirds of the world imports of butter and more than half of the cheese, will be interested in our butter and cheese at world prices; the United States has had only token trade with United Kingdom importers.

At this writing it is too early to assay the possible success of this program. Through June, sales of Gov-

Mr. McCabe is Agricultural Economist, Livestock and Livestock Products Division, FAS.

ernment-owned stocks at world prices through commercial sources totaled 133,000 pounds of butter, 530,000 pounds of nonfat dry milk solids, and 32,000 pounds of cheese. However, it must be recognized that, if the program is successful in moving large quantities of United States butter, cheese, and dry skim milk into foreign consumption, this movement may be in the nature of "one shot" deals that offer little possibility for permanent foreign markets unless prices continue to be competitive.

The Foreign Agricultural Trade Missions, which made first-hand studies of agricultural trade and market potentials of foreign areas during April and May report that "For the long range, it must be recognized that reliance upon any such artificial and costly devices [export trade concessions] cannot possibly be considered as a satisfactory solution."

It seems evident that if the dairy industry is to be permanently aided through the establishment and maintenance of a substantial export trade, such efforts should be concentrated on those products in which the United States has a competitive position. Furthermore, these efforts should be directed toward those areas where the United States has been in the market. This is a job primarily for private traders. As the Missions further stated in their report to the Secretary of Agriculture, active sales and market promotion are not logical governmental functions, and the work of acquiring and retaining expanding markets for agricultural goods of the United States must be increasingly assumed by farm organizations and trade groups.

It is in the areas where the United States has been in the market with the competitively priced products that the greatest opportunity for expanding consumption of dairy products exists. The estimated per capita consumption in South America of milk and dairy products (in terms of whole milk) is 177 pounds. The figure for the Caribbean is 150 pounds and for Central America, about 62 pounds. In the Middle East, milk consumption has been estimated at about 175 pounds per person; in Africa, it is an estimated 83 pounds. In Asia, exclusive of China and the USSR, consumption of milk is less than 70 pounds per person per year. The weighted average per capita consumption in the above areas is only one-eighth of the consumption in the 14 primary milk producing nations.

Studies of postwar trends in exports of the primary milk producing countries show that our exports of dried whole milk to the above-mentioned areas are less than two-thirds of shipments in 1948. Much of the decrease is in the market in the Western Hemisphere. Therefore, there is a greater market for the competitively priced dairy products than the United States now enjoys.

The recent declines in world production of canned milk products has not been due to lessened demand of importing countries. Between 1948 and 1952, imports of canned milk products by the countries in the six areas where the United States is in the market rose by 68 percent; in the same period, canned milk exports of the United States dropped 300 million pounds, from 427 million to 127 million pounds.

Some Barriers to Trade

Some of the decline in the exports of the competitively priced products has been attributed to the dollar shortage of many importing countries; this was noted by the Trade Missions as one of the problems confronting the United States in agricultural trade. It continues as a factor even though the world dollar position is considerably better today than it was in 1948.

Another factor presenting a problem to maintaining a high level of agricultural export trade is, as the Missions found, a continuing trend toward self-sufficiency. During the war when protective foods were scarce in most countries, nutritionists pointed to milk and dairy products as highly efficient protective foods. Furthermore, with the wartime scarcity of food and feed, there was an awareness of the more efficient nutrient production in milk and its products. Many areas stepped up their milk output and are striving to increase it more. But there is still a potential demand for milk products that can only be filled by imports.

The use of bilateral trading agreements is also listed as a problem for trade in dairy products, since only a limited opportunity is presented to the United States products to enter the markets. Even more of a problem is the fact of so-called state trading, whereby the governments control all aspects of foreign trade.

Conclusions

The only lasting contribution that export trade can make to the dairy problem is in the field of competitively priced products. This is primarily a task for nongovernmental groups. The Government

can give some assistance, particularly in meeting problems unrelated to the actual buying and selling in the world market. It might (1) assist other governments in their efforts to achieve more widespread currency convertibility, (2) provide means of allowing sales by private exporters for foreign currencies in areas where dollar trading is limited, (3) help private traders meet the better credit terms of foreign competition by the use of government credit or the government insurance of credit in agricultural exports, and (4) continue to provide for export opportunities in "surplus" items by the competitive pricing procedure on a selective basis that will not preempt normal markets of other exporting nations.

Further, the United States should, and will, continue to use its stocks of dairy products in alleviating want and distress abroad.

Finally, despite the fact that the United States has looked to export marketing for its surplus solution, it cannot be denied that the domestic market should not be overlooked. Although the United States is the largest milk producing country in the world, it does not rank among the leading consumers of dairy products. In 1952, the latest year for which comparable data are available, the United States ranked tenth in the per capita consumption (on a whole-milk-equivalent basis) of milk and dairy products. It consumed little more than half as much as was used in first-ranking New Zealand and 69 pounds less per person than ninth-ranking United Kingdom, a major importing nation.

In the consumption of fluid milk the United States ranked seventh; in cheese and butter consumption per person the United States ranked eleventh and twelveth, respectively.

During the prewar years when annual milk production was just reaching and passing the 100-billion-pound level in the United States, per capita consumption of milk was approximately 800 pounds. In 1953 production was over 121 billion pounds, but consumption was less than 690 pounds per person. If consumption had been at the prewar rate the United States would have been faced with a deficit instead of a surplus of dairy products.

With milk production in 1954 expected to be more than 2.5 billion pounds above that of last year and with domestic consumption barely keeping pace with the increase in population, commerce cannot be of trivial import, at least to the dairy side of United States agriculture.

America's Strategic Agricultural Imports

By W. W. YOUNG

Since the end of World War II the United States has been importing about $1.5 billion worth of complementary agricultural products a year—things like coffee, rubber, tea, cocoa, vegetable fibers, and spices that don't grow here. Except for coffee and cocoa, these imports come mainly from Southeast Asia—from Indonesia, Malaya, Thailand, French Indochina, and the Philippines. Rich light volcanic soils, heavy rainfall, and a warm even climate make this area a vast natural greenhouse.

These countries send us 99 percent of our teakwood, 94 percent of our milk and latex rubber, 91 percent of our coconut oil, 74 percent of our abaca (Manila hemp), and 57 percent of our pepper.

The fact that far-off Southeast Asia controls the supply of these items has cost us a lot of money and a great deal of concern. When World War II began, the shortage of shipping sharply cut our imports from this area. When the Japanese invaded these countries, supplies were almost entirely cut off, prices went up, and consumption was strictly rationed.

After the war it took some time for the countries of Southeast Asia to regain their prewar levels of output, even under the stimulus of handsome price incentives. When the Korean War began, buyers remembered the World War II experience, and prices for tropical products went even higher. By 1952, pepper was selling for more than 12 times its prewar price; sisal and henequen were selling at 6 times the prewar price; abaca, citronella, and menthol at more than 4 times the prewar price; and rubber, coconut oil, tea, and jute at more than double. To be sure, the past year has seen some leveling off and a sharp drop in some items, pepper and natural rubber, especially. But the consumer is still paying premium prices.

Mr. Young is Acting Director, Foreign Agricultural Analysis Division, FAS.

Far-off sources of supply are not only affecting prices, they are also affecting our security. Some of these tropical products fill a vital need. Most of us remember the attempts to step up rubber and cinchona production in Latin America during the last war. Production wasn't high, and what was produced was prohibitively expensive. Fortunately, we were able to develop synthetics that made it possible to meet our most critical requirements. But so far, we haven't found synthetics that can be substituted for the fibers, spices, pharmaceuticals, insecticides, and rodenticides that we import—at least no synthetics that we can produce in volume or at competitive prices.

For this reason we've put many of these tropical products on our strategic raw materials list. We're stockpiling some. We're working hard to find substitutes for others. Though the possibilities are hopeful, we haven't yet found a really competitive item in our forests or fields or in our test tubes except synthetic rubber—which is superior to natural rubber for some uses—and the synthetic antimalarials.

But though production of natural or synthetic substitutes at home may provide part of the answer to our complementary crop supply problem, we can assure ourselves of a constant supply of many of these items in another way—by encouraging production in neighboring countries. In Central and South America and in West Africa, there are areas with soil, climate, and rainfall suitable to the raising of tropical crops.

There's already been some move in this direction. Africa and Latin America have been increasing their production of tropical products. This trend is particularly marked in fibers and rubber. Brazil has quadrupled its jute production and increased its sisal production 20 times in the past 9 years. In Central America, abaca production has gone up 5 times (from 3,000 to 15,000 tons) and Haiti has tripled its sisal production over the same period. Africa increased its output of natural rubber 7 times between 1935 and 1953 and now produces 76,000 tons of milk and latex rubber a year.

On the whole, production of tropical products by our neighbors is still small. But it's a step in the right direction. With encouragement, output could be increased further.

We are offering some encouragement already. The United States has a kenaf program in Cuba, a palm oil program in Nicaragua, a research program on rubber in various Latin American countries—to name a few.

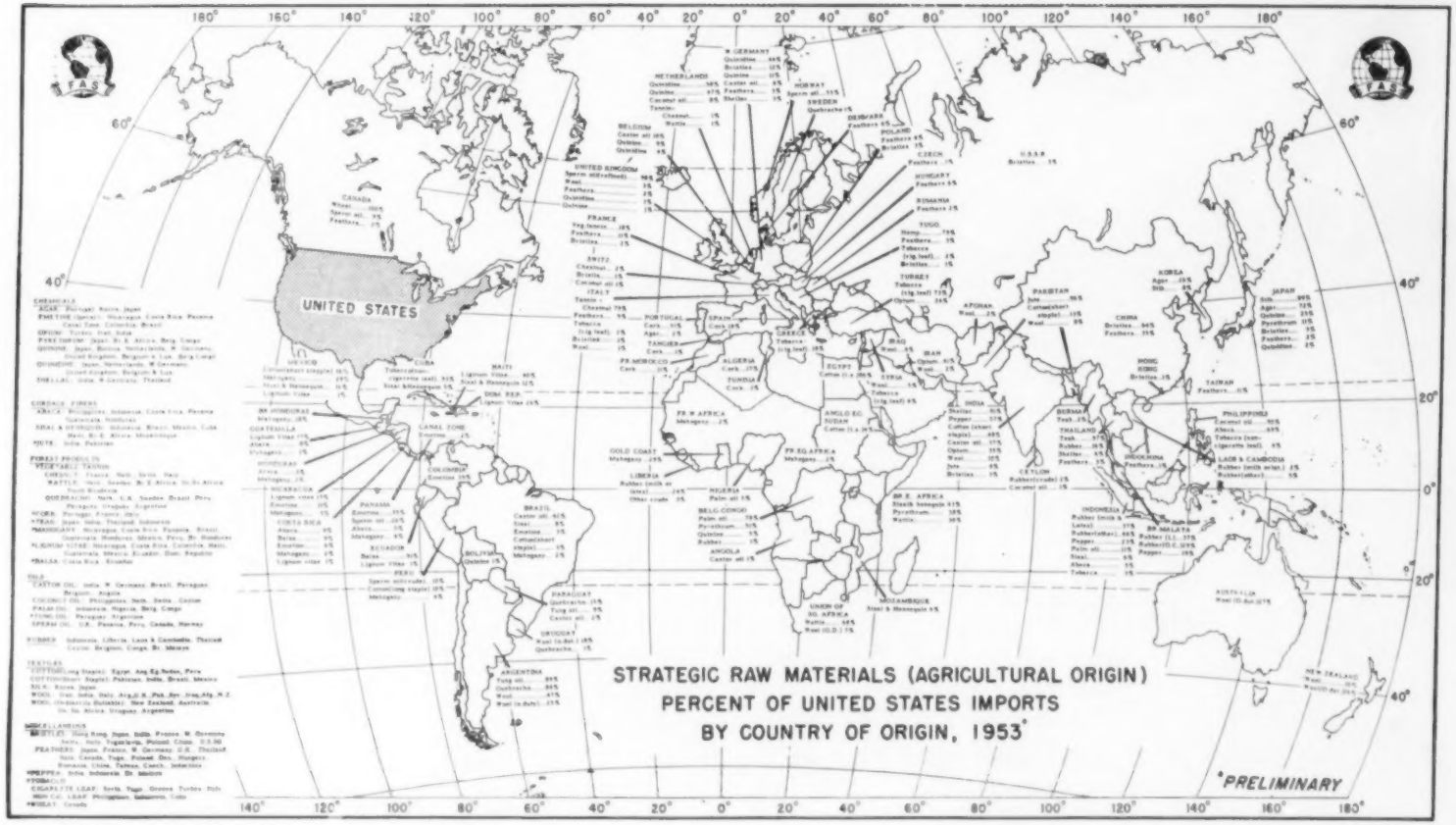
Our neighbors' producing a variety and a quantity of tropical products makes economic commonsense in a number of ways. In the first place, our need for these products is well established; there is substantial consumer demand, and there are the strategic considerations involved. In the second place, we want to expand our markets for our own agricultural products in neighboring areas. In the third place, many of these countries are not well equipped to produce the wheat and corn and meat they need, but they're ideally suited to produce fibers, coconut oil, cocoa, coffee, and so on—products that would earn them dollars with which to buy our foodstuffs and manufactures.

Our technical assistance program has done a good deal to pave the way for a shift in production. But even an all-out effort would take some time to produce results. At least 5 or 6 years are required from the time of planting before tree crops can be harvested in any quantity. But with proper technical guidance, improved agronomic methods, and improved stock, there could be substantial returns. In some cases, private capital would finance the development program. In others the domestic government might cooperate by providing such essential services as communications and roads; and, in some instances where domestic resources were inadequate, the United States might provide development loan funds with which to finance production measures.

By these means, we could solve some of the problems that have been created by our relying wholly on far-away places for commodities we need. We could help our friends by helping them earn dollars; we could help ourselves by establishing secure sources of supply of strategic tropical products close to home.

New Releases On World Agriculture

Report of Agricultural Trade Missions to the Secretary of Agriculture on Foreign Trade of the United States in Agricultural Products, 20 pp., published by FAS, June 1954, is now available at the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 15 cents a copy. This report on trade problems and potentials was made after studies in 35 countries.



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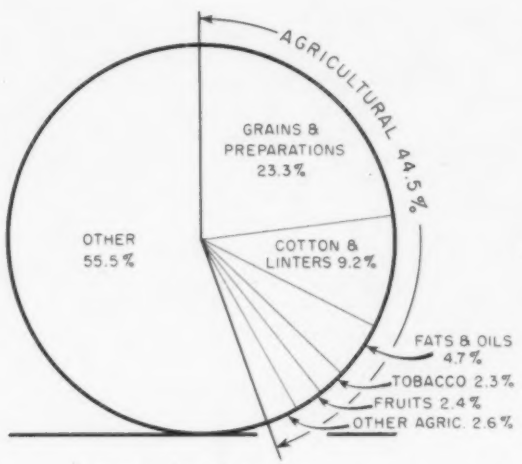
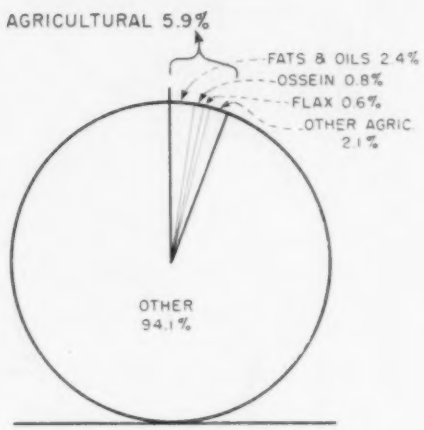
UNITED STATES – BELGIAN TRADE, 1952

U.S. EXPORTS TO BELGIUM



TOTAL $286,000,000

U.S. IMPORTS FROM BELGIUM



TOTAL $193,000,000

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